



Use of Anthropological Methods and Data In Planning and Operation

Ways of life and thought patterns of *Servicio* staff and their clientele are examined by cultural anthropologists. "Knowledge of people," they emphasize, "is as important . . . as medical science." They speak of interpersonal relations, preventive versus curative medicine, the nature of folk medicine in Latin America, and of general cultural factors, pointing to the basic place of cultural facts in planning and operating public health programs.

DEVELOPMENT of successful public health programs depends not only on the technical excellence of medical knowledge and practice, but also on the socioeconomic potential of a country and the readiness of its people to accept new ideas and habits. The economic handicaps under which public health programs in Latin America must operate are obvious; they are a function of the relatively low productivity of these countries and can be ultimately overcome only by a rising standard of living.

Other problems with which public health programs must cope may be called, for want of a better term, cultural problems. These stem in part from the great differences between the

ways of life and the thought patterns of the people toward whom *Servicio* programs are directed and the ways and patterns of the planners of such public health programs, and in part from lack of understanding of the factors which make for the most effective human relations in any given situation.

Any meaningful evaluation of the bilateral health programs of the Institute of Inter-American Affairs, therefore, presupposes an understanding of the ways of life, the value standards, and particularly the belief and customs of the Latin American people with respect to health and illness. It means, also, an appreciation of the motivations of both *Servicio* personnel and the peoples toward whom the programs are directed, and their attitudes toward each other. The following summarizes pertinent findings, analyses, and areas of agreement concerning the cultural factors affecting the bilateral health programs.

THE SCIENTIFIC APPROACH

Cultural problems cannot be solved simply by hiring friendly, understanding, well-meaning personnel. The problems must be studied and analyzed with appropriate scientific methods in much the same way a difficult biological problem is subjected to scientific examination.

George M. Foster, Ph.D., formerly director of the Institute of Social Anthropology, Smithsonian Institution, and now visiting professor of anthropology, University of California, was the evaluation team member in direct charge of this section of the report. The following members of the Institute staff carried out the special research summarized here: Charles Erasmus (Colombia and Ecuador), Isabel T. Kelly (Mexico), Kalervo Oberg (Brazil), Ozzie Simmons (Peru and Chile), George M. Foster (El Salvador and Chile). The substantial assistance of Dr. Greta Mostny in Chile is acknowledged.

Recent research in the social sciences has made available both data and techniques which make possible a more efficacious attack on these cultural problems than was possible in 1942 when the Institute of Inter-American Affairs commenced operations.

The present work was carried out by cultural anthropologists. They participated in the survey because they were the social scientists of the United States who had given the most attention to studying Latin American contemporary cultures, to finding out the ways of life in the several countries, and to analyzing the relationship of the individual to his culture. But in any long-range program of cultural analysis other social scientists, particularly sociologists and social psychologists, also should be called upon.

Speaking both from general knowledge and results of *Servicio* studies, the cultural anthropologists summarized their views in these words:

"Knowledge of the people is just as important in many aspects of a public health program as is knowledge of medical science. It is therefore recommended that, in Institute of Inter-American Affairs' program planning, provision be made for systematic research into the form and content of the cultures of each country in which work is carried out. Such research should include anthropological, sociological, psychological, and economic studies. It is further recommended that the information so obtained be utilized in planning and operation of *Servicio* projects, both to determine the economic and social potential of a country which sets absolute limits on the changes which can be brought about, and for the purpose of reducing to the lowest possible level cultural barriers to general acceptance of public health programs."

Dual Role of the Social Scientist

This statement, though general, emphasizes the dual role in which the social scientist was found to be of use: participation in the original planning, and subsequently in the operation of the programs.

The planning role stresses the necessity of finding out the nature of a culture, the way of life of the people, the motivations that make them do the things they do, their goals in life,

the objectives they are willing to strive for, and, conversely, the aspects of life that mean very little to them or that they fail to understand. An understanding of the whole cross section of the way of life of the people of a country is almost essential in order to determine limits of any program. What are the people willing and able to accept? What will they reject? What are the social and economic conditions which must exist before certain innovations can be introduced into a culture? If necessary, how can these conditions be brought about?

In the operation of the program, the social scientist's role is that of the educator. After the most practical public health program for a given country or area is determined the people must be convinced that the program really is good for them, that it is in their interest to adopt the new and abandon the old.

Two basic propositions, implicit in the above recommendation, guided the research of the anthropologists:

1. Cultures are integrated functional wholes. Public health programs should be planned and analyzed in relationship to, and as one aspect of, these wholes.

2. There are definite, though imperfectly understood, rules of human behavior which govern the processes whereby changes are brought about in culture. Specifically, popular resistance to public health programs can be scientifically studied, and methods can be developed whereby these resistances can be greatly reduced.

Anthropologists were the first social scientists to formulate the hypothesis that the way of life of a people is an organic, functional, total complex. If the analogy is not carried too far, a culture may be compared to a biological organism in that each of its parts is related in some way to all other parts. Each part fulfills a definite function in relationship to the other parts and contributes to the normal functioning of the body as a whole. Each part, in turn, draws upon all other parts for its own continued existence.

In terms of a public health program, this hypothesis means simply that health and sanitation are not isolated parts of the life of a whole people. They are related to education, social security, economic productivity, distribu-

tion of income, city planning, and a great many other things. Changes in the level of health in any given place may result from changes in the aspects of culture just mentioned; conversely, changes that can be brought about by a given activity are limited by and dependent on the changes that are occurring simultaneously or that can be brought about in these related aspects.

An Exploratory Project

It is possible, the anthropologist believes, to bring about only limited changes in any aspect of culture without accompanying changes in the other aspects of the culture. It is impossible, he believes, to take a very backward country or area and introduce into it a first-class public health program. A specific Institute health program in one of the Latin American countries illustrates this point.

Planning of the program was carried out with great care and thought. There was recognition that a successful public health program depends to a very considerable extent on raising the general economic level of the people. There was recognition that training in home economics and practical farming were integral factors which would contribute to the success of the program. It was decided, therefore, to work in an area where it would be possible to have the cooperation of another agency which was carrying out work in agriculture and home economics. In the small village selected, experimental gardens were set up; training in home economics was introduced; a health post was established, and arrangements were made to bring in a physician and a nurse several times a week to practice both preventive and curative medicine.

Nevertheless, in spite of such planning—excellent as far as it went—certain cultural characteristics of this village became apparent when an overall analysis was made, which raises doubts as to any great degree of permanent success as far as some of the main projects are concerned.

The keystone of the environmental sanitation phase of the work consisted of a privy campaign. Slabs for pit privies were cast locally and given to each of the 100-odd houses in the village. With this preliminary aid, it was expected that within several months most of the

slabs would be in place in back yards, the cost of installation borne by the householder. But 6 months later less than half the slabs had been put in use. The majority were still lying against the front of the houses where they had been placed, overgrown with weeds, and non-existent as far as the householders were concerned. What were possible reasons for this situation?

A census of this village of 600 people was made and the following facts came to light: The village was highly unstable in terms of social organization. About half the inhabitants had lived there for 5 years or less. They did not consider themselves as really permanent members of the community, but rather as migrants who had stopped there while awaiting the opportunity to move on. They felt no attachment to the community, no stake in its future, and they had no interest in making capital investments in something they might not be around to enjoy. A measure of the social disorganization of the village and of the transitory nature of the population was the fact that five professional prostitutes plied their trade, a remarkably large figure in comparison with the average settled Latin American village.

In addition, the land was marginal and wages were low. The least expensive houses in the village were worth from \$18 to \$35. Instructions for building privies were fairly precise, and the cost was about \$10. This meant that people who knew very little about environmental sanitation, who had nothing in their cultural background to make them understand or realize the importance of pit privies, were being asked to make an investment of from 25 to 50 percent of the total value of their homes. It was quite obvious that most of these lower income families could in no way be persuaded to make an investment of this magnitude.

From the census it was also discovered that a considerable number of people in this community lived rent-free in the homes they occupied. The owners were away for extended lengths of time, or they had migrated to other places but had kept their old homes. In order to have their property cared for, they had permitted relatives or friends to occupy the dwellings. Since the actual inhabitants were not the owners and might be put out on a moment's

notice, they were unwilling to spend a relatively enormous sum to build a privy. The owners had little incentive to make such a capital investment since they would not be there to take advantage of it.

Problems of Education

Once it is decided what type of public health project will work in a given place, what is compatible with sociological and economic possibilities, what will have maximum effectiveness in raising general health standards, the problem remains of convincing the people of the need for the project. The planners' ideas as to what is necessary for good health frequently and perhaps usually do not correspond with the felt needs of the people. An important and difficult job of education must be carried out.

The essential problem is this: How is it possible to convince the people that modern medicine and hygienic living are a form of personal health insurance that will keep the individual in better health, make him live longer, and make him able to work more efficiently and enjoy life more fully? How can people who consider much of illness to be due to magical causes or divine will be made to understand scientific concepts of disease and germs, and be made to act accordingly? How can such people be persuaded to take elementary health precautions to avoid disease, to come to the doctor at the first sign of illness, to follow closely the doctor's prescribed treatment, and to avoid the *curandero* (the native medical practitioner) and associated folk remedies?

Fundamentally, the problem is one of persuading people to drop old habits and ideas and to substitute for them new ones which heretofore have been outside their conceptual world. The public health specialist is not operating in a vacuum; his subjects do not feel he is bringing light on a problem about which they know nothing. Rather, he is working in an area in which the subjects already have definite and hard-to-shake beliefs which they are as convinced are correct as he is certain are mistaken. They are not at all sure the doctor's ideas are better than those of the *curandero*; rather, they are often convinced the doctor's ideas are inferior.

Anthropological Techniques

Before attempting to answer some of these questions, the working techniques used by the anthropologists in gathering their data may be noted.

The health center was the focal point of a majority of the analyses. Anthropologists interviewed the directors of these centers, the physicians, nurses, sanitary engineers, sanitarians, and nurse's aides. They sat in the physician's room for as long as 3 hours, observing his techniques with a variety of patients.

Nurses were similarly observed. They were accompanied on visits to the homes; they were studied at BCG-vaccination centers, at "mothers' clubs" where pregnant women were given instruction, and at volunteer workers' training sessions.

Operations of *Servicio* hospitals were also observed. On a random sampling, door-to-door basis, interviewing of populations within the area of health centers was done to obtain a cross section of public opinion with respect to *Servicio* projects.

Health education programs were studied, and limited experimental work in health education was carried out. Tests were given in nursing schools to determine the extent of retention of erroneous folk beliefs among nursing students.

Use was made of the usually rather poor statistical data available.

Informants were "worked" in typical ethnographical fashion to formulate the basic patterns of folk belief concerning health and disease.

The data gathered provided a rather full description of folk medicine in the seven countries studied, including information on the types of illness for which patients will consult doctors and the types which they prefer to take to the *curandero* or treat with home remedies; a good knowledge of health center operations as they impinge upon patients; information on attitudes of patients, potential and former, toward health centers, hospitals, and the medical profession in general; and information on attitudes of physicians, nurses, sanitarians, and other personnel toward their jobs, toward each other, and toward patients, and their ideas of

their problems. Statistical data showing the extent to which *Servicio* programs were patronized were analyzed, as were data on community organization and the possibilities of stimulating better organization as an aid to public health programs. Very significant information on the relationship between curative and preventive medicine, as they bear on public health problems, was obtained.

From the masses of field notes, several general categories of data emerged. Those selected as bearing directly upon the objectives of the survey were (a) interpersonal relations; (b) relative emphasis on curative and preventive medicine; (c) the nature of folk medicine; and (d) general cultural factors which impinge upon public health programs.

INTERPERSONAL RELATIONS

In all countries observed it was apparent that genuinely sympathetic relations between the physicians, nurses, and other *Servicio* personnel, and the patients, are essential for smoothly functioning programs. If the interpersonal relations are good, an average or mediocre program, so far as planning is concerned, can be highly successful; conversely, the most brilliantly conceived program amounts to very little if interpersonal relations are poor, if the program is administered in a mechanical manner, if the people who carry it out are not genuinely sympathetic toward the needs and problems of the people they are supposed to be helping. This observation sounds more like a truism than the result of scientific analysis; it is made because, obvious as it may be, many *Servicio* programs are falling short of their potential because of poor interpersonal relations between staff members and patients.

How can good interpersonal relations be achieved? This is a complex problem which admits of no easy solution. In part, it is due to the rather rigid concepts of class and caste which prevail in Latin American countries, with culturally determined modes of contact between different classes. In part, it is due to a lack of education of the masses, and to innate fear and suspicion of members of one group toward mem-

bers of others. The solution will begin to come as these social barriers are broken down.

Public Health Nurses

There is one key to the problem, however, which holds out great hope for the immediate future. Without exception, the anthropologists were impressed with the importance of the role of the trained public health nurse, the university graduate. In Mexico, in El Salvador, in Ecuador, in Chile, in every country from which information was available, a most important factor making for the success of a public health program was seen to be the availability of graduate public health nurses. Even when the attitude of the physicians is cold and unfriendly, good public health nurses can do much to establish good relations between the health center and the patients.

In a *Servicio* center in a large capital city, for example, some physicians observed were very unfeeling. Nevertheless, a competent group of public health nurses had succeeded in establishing themselves as friends of the people. When the nurses made home visits, children often saw them at a distance and ran with the news to their mothers, who greeted the nurses at the door with a smile and warm reception. Mothers regarded the nurses as real friends, not just as nurses, and as their buffers against the cold formality of the center itself.

Naturally, there are great differences between nurses who have had identical training. Nevertheless, the great majority of Latin American public health nurses who are graduates of good schools are excellent in their interpersonal relations with patients.

The Need for Nursing Schools

Although *visitadoras* (nurse's aides), often with as little as 4 years of basic education, were not observed to the same extent as were the nurses, it was felt that they functioned far less successfully. Often they knew little more than the people they were trying to help; they were timid, unsure of themselves, lacking in basic education, and unable to inspire much confidence. Faith in their ability on the part of professional personnel generally was low,

nurses saying that they must be closely watched all the time, and physicians saying that their turnover was high because of low salaries and because after learning a little they would go into business as *inyeccionistas* (dispensers of hypodermic injections).

The anthropologists felt that every reasonable effort should be made to stimulate the development of more nursing schools, that perhaps even more emphasis should be placed on this aspect of Institute activities than in the past. A question has been raised as to whether *visitadoras* should be eliminated entirely, but practical necessity dictates their continued use. If greater attention is given to the educational and cultural background of future *visitadoras*, and if their training is planned accordingly, it is probable that their effectiveness can be considerably increased. In Brazil, for example, good use appears to be made of them. But *visitadoras* can never be more than a poor substitute for well-trained nurses.

PREVENTIVE vs. CURATIVE MEDICINE

The problem of good interpersonal relations between *Servicio* staff members and patients is linked with the question of curative versus preventive medicine. When the initial studies were made in Mexico, Colombia, Peru, and Brazil, significant differences in the quality of the interpersonal relations were noted. To illustrate, it appeared that there was a closer understanding between staff members and patients in Brazil than in Peru. The first hypothesis advanced to explain this situation was rooted in the problem of class structure. In the Latin American countries which have a comparatively large Indian population, it was observed that educated city people tended to look upon the less fortunate, and particularly the Indian groups, as beings from another world incapable of being assimilated as useful members of national life. At first glance it seemed as if in those countries where these conditions prevailed the quality of interpersonal relations was generally poor.

Following subsequent work in El Salvador, Ecuador, and Chile, it became apparent that this tentative formulation did not hold. In

Ecuador the social gulfs are about as marked as in any American country; yet the physicians and nurses appeared generally to get along well with the patients. Tensions and frictions seemed much less prevalent than in Colombia, where the socioeconomic level was much higher and class differences were less pronounced. The tentative hypothesis of anthropologists—and it should be tested further—is that in those countries where there is frank recognition that for a long time to come curative medicine must be an integral part of any public health program, relations between staff members and the public are good. Conversely, where curative functions are grudgingly accepted by the *Servicio* authorities or avoided entirely, interpersonal relations are poor, and public health programs are much less successful.

Whatever the merits of a public health program based on preventive medicine, the fact remains that the average Latin American is interested in physicians and nurses because they can cure his ills. He usually avails himself of *Servicio* services not primarily to keep well, but to get well.

A survey of 100 families was made in the area of the Beatriz Velasco Aleman Center in Mexico City to find out who patronized the center, and why. Half of the people interviewed had never been to the center. Of the approximately 50 families that had gone, 25 went because they had a sick child that needed attention; 12 went because they could get free milk; and a number of others went because they needed chest X-rays or other clinical services. Only 3 or 4 gave as their main reason for attending the clinic their desire for a routine checkup of an infant. Conversely, one of the principal reasons why mothers had not taken their children was the fact that they were well—"why should one take well children to see a doctor?"

Popular Concepts of Health

This reluctance to seek or accept medical advice when apparently well is deep-rooted in Latin American concepts of well-being. Health, it is thought, consists in feeling well; it is not possible to be ill if one feels well and has no evident symptoms of disease. Since

sickness is due to sins of omission or commission, or to fate or luck, there is very little a well person can or ought to do to keep himself well, at least as far as a physician's attentions are concerned. Treatment is sought only when a person becomes ill.

This feeling about health, which is all too common with the uninformed, is akin to the concept of machinery maintenance: If a machine runs well, obviously it is in good condition and needs no attention; it is logical to repair it only when it breaks down. Periodic checkups have no logical reason or explanation in the minds of people with this point of view. They feel they are doing the center a great favor in keeping appointments, rather than that they are being helped. There seems to be no stimulus sufficiently strong to keep well people coming to health centers, unless certain concessions toward what the people believe they need are made.

Persuasion by Demonstration

Moreover, there is a deep-seated distrust of the motives and knowledge of physicians in much of Latin America. Many people feel that the native *curandero* knows more than a physician, and everyone can and loves to tell of situations in which the physician failed and the *curandero* effected a cure. At the same time, the average Latin American is pragmatic by nature. One of the reasons, therefore, why *Servicio* programs should stress curative medicine is that it is about the only way the physician can show the patient that he knows what he is doing.

To illustrate, in Temuco, Chile, a bad whooping cough epidemic occurred in 1951. Fortunately, health authorities were in a position to vaccinate a large number of children and to arrest the spread of the epidemic. There is no doubt in the minds of most mothers in that town that the physician is a good man to know when whooping cough threatens. And this faith has spread to other inoculations as well; BCG vaccinations are being carried out with a high degree of cooperation from all.

A similar case was noted in Quito, Ecuador. As in much of Latin America, the people in this city believe that fresh air is dangerous, particu-

larly for new mothers. Many complaints against the new *Servicio* maternity hospital were believed to stem from the fact that there is too much fresh air. But even more people remarked, "Fresh air is dangerous, but there is plenty of it at the *Maternidad* and it seems to harm no one, so maybe after all it isn't dangerous." Similarly, new mothers are sent home after a stay of about 5 days, whereas the culture pattern dictates that the mother should remain in bed as long as 2 weeks. There were criticisms of this short stay, but again the remark was heard that the *Maternidad* mothers had more and better babies, with no apparent harm to mother or child, so perhaps the physicians knew what they were doing. Thus, educational work, essential to any public health program, was being carried on in a forceful manner.

The satisfaction of the patient in receiving a public health service which he or she wants and the satisfaction of the physician and nurse in offering a service a patient desires seem to have promoted an atmosphere in which suspicion and tension have been reduced to a minimum, and in which, as a consequence, really good preventive measures can be effected. In the Cerro Barón Center, Valparaiso, Chile, where curative medicine is recognized as just as important as preventive medicine and where no sick child is ever turned away, more than half of the visits are "well baby" visits. By meeting the felt needs of the people—helping them when they are ill—the physicians and nurses have been able to persuade a sizeable portion of the people that it is a good idea to take preventive measures even though an individual is perfectly healthy.

If the premise is accepted that in the long run better world health will result from preventive medicine, the fact must also be recognized that a sizable amount of curative services must be available to develop the conditions essential for a preventive program.

NATURE OF FOLK MEDICINE

If *Servicio* personnel were better acquainted with prevailing concepts and practices of folk medicine, many opportunities would occur for contributing to the overall effectiveness of pro-

grams. Although in Latin America there is no single integrated theory of disease, there are certain common themes and patterns which are so general as to form a framework within which local variations can be studied. These ideas of health and illness are the end result of a long period of fusion of two currents of thought: the American Indian concept of the universe and man's place in it, and the ancient medical heritage brought to the New World by the Spaniards.

Heritage of Hippocrates

Probably the largest single element in the Latin American beliefs is that which has come down through two milleniums from the humoral doctrine of Hippocrates and Galen. Health resulted, according to that theory, when the four humors—blood, phlegm, yellow bile, and black bile—were in proper proportions in the body. These four humors, which corresponded to what were believed to be the four elements of the universe—fire, air, earth, and water—were characterized by opposing qualities of heat, cold, dryness, and moistness. This doctrine, with subsequent modifications and elaborations, reached Spain and Western Europe via the Arab world and was transmitted to Hispanic America, where it remained the basis of medical classification and teaching until the 18th century. Selected aspects of this theory—particularly the concept of heat and cold as qualities of the body, of types of illnesses, and of foods and herbs—became part of the folk belief of most peoples. General concepts of “humors” have also prevailed.

Hence, there has come to be a widespread tendency to explain much illness in terms of “heat” or “cold,” qualities which do not necessarily indicate actual temperatures, but which are innate attributes of substances. Pneumonia, for example, is often classified as a “cold” disease, whereas typhoid fever may be a “hot” disease. Foods, as well as herbs and other remedies, are also frequently classified as “hot” or “cold.” In Xochimilco, Mexico, for example, some of the “hot” foods are sugar, honey, green chile pepper, brandy, black coffee, human milk, garlic, peanuts, onions, and salt. “Cold” foods are rice, spaghetti, potatoes, most

meats, beans, most leafy vegetables, most fruits, coffee with milk, and chocolate. A concomitant belief is that “hot” illnesses should be treated with “cold” medicaments and foods, and vice versa. Although there is no universal agreement as to which foods or diseases are “hot” and which are “cold,” this concept of illness exists in most parts of Latin America.

The “hot” and “cold” distinction provides a scheme for defining under what conditions certain foods can be eaten, what the results will be if the scheme is violated, which remedies can be used for which illnesses, and what the results will be if these rules are transgressed. In short, it appears that “hot” and “cold” distinction provides a general framework of do's and don'ts for much of popular medicine in Latin America.

The “Clean Stomach” Belief

A second common belief is that periodic cleansing of the stomach and intestinal tract by means of strong physics is essential to health. The common Latin American practice of taking a physic every 3 or 4 months is rooted in this concept. The belief seems to be associated with the idea that the liver is a chief source of illness, and that purification of the blood is essential to recovery from illness or maintenance of health. The relatively high proportion of digestive upsets among persons questioned suggests the reason for preoccupation with the stomach, and also explains the extraordinary number of herbal remedies which “wash the stomach clean.” Preoccupation with the blood is exhibited in the general belief that extraction of blood for venereal disease or other tests weakens the patient, and explains why in some communities health authorities making periodic checkups of children have been run out of town by irate parents.

Causative Beliefs

In each country or area studied, folk medicine was found to have a core of principal illnesses, none of which has an exact equivalent in modern medicine. Each illness has a recognized cause or causes, symptoms, and cure, and can be described in the same way the medical practitioner describes the etiologies, syndromes,

and cures of the diseases recognized by modern science.

Some "folk" causes may be said to be "rational," in that they are explained on the basis of the body of empirical knowledge to which the group has access. The knowledge may be erroneous in terms of modern science, but it makes sense in terms of the logical premises of the group. For example, the widespread belief that experiencing abnormal cold is the cause of respiratory illness is "rational."

Closely related to extreme cold as a causative agent is *aire* or *mal aire* ("air," "bad air"), when this is explained as an actual current of air which cools the body, producing various types of illnesses. Contracting *aire* is almost inevitable if one emerges from a house when warm, or if one breathes air much colder than what one has just been breathing. From these beliefs stems the Latin American idea that central heating is unhygienic if not actually dangerous. The violations of "hot" and "cold" food prohibitions, when such violations lead to illness, may also be classified among the "rational" causes.

The role attributed to "microbes," however poorly the term is understood, is another evidence of a rational pattern. For example, the recognizably contagious qualities of such diseases as measles and smallpox make them fall in this category. The belief that gonorrhea comes from intercourse with a menstruating woman or from sitting on a hot rock, that malaria comes from eating certain fruits or not sleeping enough at night, and that "bad odors" cause illness, as well as the Chilean concept of *empacho*, likewise are "rational." The latter is one of the most common folk ailments afflicting children and is believed to be caused by an object such as green fruit, soft bread, or half-cooked food becoming stuck in the stomach or intestines.

"Natural" Causes

In general, illness and injury which are explained as due to such "rational" or empirically determined causes are considered by the folk to be "natural." The most common "natural" diseases have names which correspond to those of modern medicine, and in terms of popular syndromes and sometimes etiologies, but rarely cures, they are essentially the same. They in-

clude whooping cough, colds, grippe, appendicitis, diphtheria, measles, chickenpox, smallpox, intestinal worms, diarrhea, venereal disease, typhoid fever, pneumonia, and tuberculosis.

"Magical" Causes

Other causes may be said to be magical or supernatural in form, in that they lie outside the body of empirical knowledge of the group and are not verifiable or understandable in terms of that knowledge. *Mal de ojo* or *el ojo* ("evil eye") is the most widespread "illness" in Latin America which is explained in magical terms. Certain individuals are believed to have the power, often unintentional and sometimes unknown to themselves, of causing illness in small children by looking at, touching, or admiring them.

Sometimes *susto* ("fright") is magical in origin, in that a malignant spirit or ghost may take possession of an individual or be the cause of the fright. Bewitchment, which involves sticking pins into, or otherwise injuring, rag dolls or images representing a victim, is not uncommon. The belief that a corpse emanates a cold essence which can cause bystanders to fall ill, unless ceremonial bathing or cleansing follow, is another example of a supernaturally produced condition. In El Salvador this emanation is *hijillo*, and in Colombia *hielo de muerto*. *Mal aire*, when the malevolent air is due to evil spirits, is a supernatural happening, as are *entueños* (postpartum pains caused by contraction of the uterus), widely believed to result when the placenta is not disposed of in ritual fashion.

Psychological Causes

Folk recognition that strong emotional experiences can cause an individual to fall ill is evidenced by the wide variety of sicknesses that are essentially psychosomatic. Those emotional experiences which most often produce physiological results include fright, anger, desire, imagined rejection, embarrassment or shame, disillusion, and sadness. *Susto* or *espanto* results from fright, and, frequently, it is explained as a shock which separates the spirit from the body. The cure depends on inducing the spirit to return to its temporal home.

Colerina is the term often used for disturbances produced by great anger or rage; in Mexico epilepsy is thought to be due to this experience.

Desires are called *antojos*; unfulfilled food desires of pregnant women may result in birthmarks, whereas those of small children will cause the child to suffer gastric upsets. In Chile, the wise parent, consequently, never denies a child any food, drink, or sweet it wants, however inappropriate it may be. In most countries sibling rivalry is recognized, often in a form in which a child shows unconscious resentment toward an unborn child of its mother. In Mexico this jealousy is known as *sipe*, in El Salvador the child experiencing this feeling *está peche*; in Ecuador *pasión* results; in Peru the term is *caisa*, and in Chile it is *pensión* (anxiety). In Peru embarrassment or shame produces *chucaque*, and in El Salvador it causes a bothersome sty known as *pispelo*. The Peruvian *tiricia* is the result of a strong disillusion, and the Ecuadorian *mal de corazón* results from the loss of a loved one, loss of money or property, or some similar saddening experience.

"Popular" Curative Techniques

Folk cures make use of a variety of techniques, the most common of which is the drinking of herb teas. Massage is often resorted to, and it is usually explained as an action that removes the illness or poison from the body. The famous egg-rubbing of the body of a child believed to suffer from the evil eye falls in this category. A warm, freshly laid egg is passed over the body of the patient, then broken open and examined; if a spot appears on the yolk it is assumed that *el ojo* has struck the child. This diagnostic practice is also believed to have therapeutic value.

Poultices are often used, sometimes for mechanical effects but more commonly for magical reasons: in Peru and Colombia a live pigeon is split open and applied to the body for certain illnesses. Diet, with special attention to the "hot" or "cold" qualities of the foods, is of importance in all places. Certain days and certain hours of the day are often used for curing. Religious orations and creeds frequently are recited.

Medical Practitioners

Folk medical practitioners are most commonly called *curanderos* (feminine, *curanderas*), though other terms are encountered. Midwives are called variously *parteras*, *comarconas*, or *curiosas*. Usually these men and women occupy their positions after long periods of formal or informal training, not infrequently as apprentices or assistants to older practitioners. Only rarely do they have divine or supernatural powers to aid in their cures. Sometimes they may use "black magic," but this also is relatively rare. In general, they are honest, sincere practitioners and respected members of the community. Beyond doubt, they frequently cure sickness and alleviate suffering; their knowledge of herbs, as well as of psychology, must be very considerable. In most cases they cannot be looked upon as witch doctors or as frauds or shams.

A Prevalent Dichotomy

A more or less pronounced dichotomy exists in the minds of many Latin Americans between "folk" illnesses and those recognized by medical science. People know that certain types of disease, which do not respond to treatment by *curanderos*, can be cured or prevented by the physician. At the same time they feel that there are other illnesses that are best treated by home remedies or *curanderos*—illnesses which are not understood by physicians, and the very presence of which is denied by physicians. These illnesses are generally those here referred to as "folk" diseases, particularly those described as having magical or psychological etiologies. If an illness is diagnosed, for example, as evil eye, obviously it is poor judgment to take the patient for treatment to a person who denies the existence of the disease. To illustrate, in Valparaiso, Chile, a public health nurse visited a home and found a child suffering from bronchial pneumonia. She asked why the child had not been brought to the health center for treatment and was told, "The child is suffering from evil eye, and you know as well as I that the doctor does not know anything about the evil eye."

This dichotomy is not hard and fast; there

is no sharp line in the minds of all persons between the two categories. Yet the common tendency on the part of physicians and nurses to ignore or ridicule folk concepts of illness undoubtedly at times reduces their effectiveness in that this attitude reinforces the dichotomy. As a result, many genuinely sick persons do not receive proper medical treatment. Although there is a growing awareness of microbes in Latin America, there is a marked tendency to understand by "microbes" those things that cause the illnesses that physicians can cure. Microbes have nothing to do with the *el ojo*, *susto*, and the like.

Several attempts were made to measure the extent of the practical effect of this dichotomy between "folk" and "doctor's" diseases. In Quito, Ecuador, a list of the most common complaints was given to 48 school children of both sexes, ages 11 and 12 years, and they were asked to indicate which illnesses they would take to a doctor and which they would treat with home remedies or take to a *curandero*. It was assumed that the opinions expressed would correspond closely with those which they had heard from parents and other adults. Results are shown in the accompanying table.

In Chile a similar test was made, and similar results were found; the evil eye, *aire*, *empacho*, and *pasmo* (facial paralysis thought to result from exposure to air) were universally agreed upon as being unknown to doctors. Individuals suffering from these diseases would therefore receive home treatment, often gravely prejudicing their chances of recovery since the symptoms are often symptoms of serious illnesses. Anemia, appendicitis, hernia, meningitis, pneumonia, smallpox, typhoid, and the like, generally (but not invariably) were thought best treated by doctors. Results of a survey in Colombia also were similar. Illnesses with magical or psychological etiologies tended to receive home treatment or that of the *curandero*, whereas those due to "natural" causes were more likely to be taken to doctors.

The Physician and the Curandero

The conflict between folk medicine and scientific medicine is summed up in the persons of the physician and *curandero*. Each repre-

Percentage of 48 school children in Quito, Ecuador, who would consult a doctor or a *curandero* for specified illnesses

| Illness | Would consult a <i>curandero</i> or treat with home remedies (percent) | Would consult a doctor (percent) |
|---------------------------------|--|----------------------------------|
| Fright ¹ | 98 | 2 |
| Air ¹ | 93 | 7 |
| Witchcraft ¹ | 86 | 14 |
| Colic..... | 79 | 21 |
| Evil eye ¹ | 75 | 25 |
| Stomatitis..... | 72 | 28 |
| <i>Pasmo</i> ¹ | 66 | 34 |
| Open infections..... | 66 | 34 |
| Urinary complaints..... | 64 | 36 |
| Skin disorders..... | 61 | 39 |
| Diarrhea and vomiting..... | 58 | 42 |
| Emaciation..... | 49 | 51 |
| Smallpox..... | 31 | 69 |
| Dysentery with blood..... | 25 | 75 |
| Pneumonia..... | 25 | 75 |
| Whooping cough..... | 20 | 80 |
| Liver complaints..... | 16 | 84 |
| Paralysis..... | 9 | 91 |
| Typhoid..... | 7 | 93 |
| Bronchitis..... | 6 | 94 |
| Malaria..... | 5 | 95 |
| Tuberculosis..... | 4 | 96 |

¹ Diseases with magical or psychological etiologies.

sents the highest achievement in his field. The attitudes of the people of Latin America toward each, therefore, are pertinent to this study. Unfortunately, the physician frequently comes off second best. This is due in part to the inherent nature of the situation, and in part to native suspicion of individuals in other social classes, particularly those above them.

The *curandero* operates under conditions that are relatively more favorable than those of the physician, from the point of view of impressing the patient with concrete results and apparent success. He treats folk illnesses, the symptoms of which often are so ill-defined that he cannot help but succeed in alleviating them. If the vague physiological symptoms identified with the illness persist or reappear after the cure, the *curandero* can always say that the case has become complicated and requires another series of cures or a different cure, or that a new and different illness has attacked the patient. Also, most *curanderos* do not claim to cure all illnesses, and in many cases can even recom-

mend that a patient consult a physician. These factors establish the *curanderos* in the minds of the folk as fair, open-minded individuals willing to admit their limitations. Finally, the *curandero's* diagnostic techniques do not require elaborate and exhaustive questioning of the patient as to symptoms, case history, and the like. He has certain magical or automatic devices which he applies to specific situations, and the answers follow almost like clockwork. Moreover, there are many cases reported by field observers in which a physician failed to cure an individual and a *curandero* had apparently genuine success.

The physician enjoys few of these advantages. His diagnosis is seldom cut and dried, he cannot guarantee quick results, and he seldom enjoys the faith and confidence accorded the *curandero* because he is from a social class instinctively distrusted by the majority of his patients. Moreover, the physician seldom admits that a *curandero* can cure things which he is incapable of treating, and this is interpreted as meaning that he conceitedly and selfishly believes himself to be the sole repository of medical knowledge—a point of view which the village is loath to accept.

Criticisms of physicians and their professional methods are rife among the patients of the lower class, and such criticisms are usually based on a complete lack of comprehension of medicine, its methods, and its limitations. Several patients pointed out that physicians asked them questions about their symptoms, which showed that the physicians were not as smart as they thought they were. A good *curandero* doesn't have to ask questions, so why should a man who pretends to know a great deal more have to do so? Another patient scornfully pointed out that a president of Colombia died "even though he had 50 physicians at his bedside." The implication was that if 50 physicians could not keep a man from dying, a single doctor in a short interview was almost worse than worthless.

A final handicap of the physician is the general tendency of the people to exhaust home remedies and the arts of the *curandero* before appealing to the physician. The physician, therefore, gets many cases too late to effect a cure and many others which are simply in-

curable. Hence, the failures of folk medicine as well as those of his own profession are heaped upon his shoulders.

Utility of Cultural Knowledge

If the people in Latin America could come to believe that the physicians and nurses understand the folk beliefs concerning health and sickness and approve of some of the folk remedies (for example, isolation, bathing, specialized diet, and herbal teas), but that they simply feel that for many things they have even better methods, it is very likely that the people would evince greater tolerance for modern medicine. There must be great numbers of people who would like to follow a physician's recommendations but are afraid to do so because of folk tradition or because of doubts arising from the feeling that the physicians do not know about some types of sickness.

The utility of knowledge of folk concepts of illness and treatment has been demonstrated. In Chile, as in the other countries, herbal teas form an important part of the *curandero's* pharmacopoeia, and popular confidence in them is great. For infant diarrhea some *Servicio* physicians therefore prescribe, in addition to other remedies, herbal teas. Drinking quantities of liquid is part of the treatment for diarrhea; by the device of teas it is possible to insure boiled, and therefore safe, water. Thus, by interpreting treatment in terms of local belief, the physicians have convinced the mothers that they know what they are talking about, and at the same time, have assured proper treatment of the child.

In Ecuador—and most of the rest of Latin America—it is believed that young children are "delicate," that they are more susceptible to danger from witchcraft, microbes, and other disease-causing agents than adults. A water supply system was installed by the *Servicio* in Tulcan. Adults showed little interest for themselves in a source of pure water—they had been drinking contaminated water all their lives, with no apparent ill effects—but they recognized that their children were more vulnerable than they. By placing the emphasis for the need for pure water upon the health of the children, rather than on health in the abstract, greater interest was aroused.

In Colombia, *malos olores* (bad odors) are popularly believed to cause disease. Typhoid fever particularly is described as a disease associated with bad smells. For this reason, considerable opposition to pit privies exists in some places. Greater attention to means of deodorizing pit privies might very well result in their greater acceptance. Conversely, knowledge of this belief ought to provide a strong focal point to gain support for sanitation campaigns, particularly modern sewage- and garbage-disposal plans.

In Mexico, isolation of patients is a part of the treatment of some illnesses. In most cases isolation stems from the belief that the patient is in a weakened condition and that visitors knowingly or unknowingly might further injure him, particularly through the evil effects of *aire*, of strong body "humors," or of "strong" blood. There is little thought that a patient is coughing germs which may infect others in the family. But, whatever the folk reasoning, an essentially hygienic practice is followed, one that can be successfully utilized by physicians and nurses in the treatment of communicable diseases. The nurse need not remark on the potential danger of *aire*; she can simply say that visitors are undesirable, and the family will probably follow her recommendation, even though she is thinking in terms of contagion and they in terms of magic.

GENERAL CULTURAL FACTORS

More general aspects of Latin American culture patterns bearing upon the Institute's public health programs were also covered in the evaluation. Mexico furnished a striking example. A survey had shown that in a large urban health center 43 percent of registered women discontinued prenatal treatment before delivery, the majority failing to return to the center after the first gynecologic examination. In a nearby semirural health center only 21 percent discontinued treatment. Allowing for some variation because an urban population is less stable than a rural one, there was nevertheless a significant difference between the percentages for the two centers.

The explanation seemed to be based on Mexi-

can (and Latin American) ideas of decorum and modesty. The first prenatal examination comes as a great shock to most women. The examination itself is embarrassing, and is doubly so when it is made by a man. In the rural health center the women were carefully prepared for the experience. The nurse explained just what would be done, why it must be done, that it probably would be done only once during the course of treatment, and that she (the nurse) would be present all the time. In the large center the patients were given little idea of what to expect.

In another center, in Colombia, there was practically no gynecologic examination. The women refused to submit to it, partly because of their own feelings, and partly because their husbands were outraged at the idea of any other man having such intimate contact with their wives.

Even in Chile, where health services were generally well advanced, it was noted in a large health center that the gynecologic examination, such as it was, was done by a midwife, the physician hardly looking at the patient beyond taking her pulse and listening to her chest. On the other hand, in a small center in El Salvador where women were well prepared by the nurse, there was little embarrassment shown during examinations, and relatively few of the women failed to return for further treatment.

The impersonality of modern medicine runs into a cultural barrier of considerable importance in Latin America: Prevailing concepts of modesty are incompatible with the requirements of medical treatment. At the very least, a thorough and sympathetic explanation appears to be necessary to make gynecologic examinations generally acceptable.

Physician-Patient Communication

Cultural factors pose serious barriers to full development of public health programs in other ways, too. In all countries studied the problem of communication between physicians and patients existed. A significant number of patients, after seeing the physician, did not know what they had been told to do.

In the Cerro Barón Center in Valparaiso, Chile, one of the finest in Latin America, 13

women were asked as they emerged from the physician's room to repeat his instructions. The remarks of 10 indicated that they had failed to profit from the visit. Similar results were found in the other countries. In the Cerro Barón Center, and in some other centers, this problem was partially solved by having the physician write the instructions on the patient's record card. Before leaving the center, the patient would visit the nurse, who would repeat from the card the instructions and explain in greater detail what the patient was supposed to do.

Failure to comprehend the physician's instructions was due to a variety of reasons. Often, a woman patient would be nervous and uneasy in the presence of a man, particularly since she usually was in a lower social class than he; she would therefore be unable to concentrate or to grasp what was being said.

Development of greater rapport between physicians and patients will partially solve this problem. But it must be realized that the manner in which instructions are phrased is also highly important. What appears simple and logical to an educated person may not be at all simple to a less well educated, often illiterate, individual. In the United States, it is taken for granted that patients will understand what is meant by such instructions as "every 3 hours." Yet in much of Latin America this expression is meaningless.

In a Mexican center, for example, the physician told a mother to nurse her baby "every 3 hours." The anthropologist asked the mother at what hours she would feed the child. "At six, seven, eight, and so on," replied the mother. The startled physician repeated his instructions, and the anthropologist again asked the mother when she was supposed to feed the child. The answer was the same. Instructions in terms of time as defined by hours simply were meaningless to this woman.

When significant numbers of a center's patients come from illiterate and low-income groups, groups which are not used to clocks, it would seem wise to work out adaptations of the time concept in terms of phenomena which would have meaning to the people. In most cities, there are factory whistles, municipal sirens, church bells, and the like, which sound at

regular hours. Time points with meaning for each area could be established, and instructions might be phrased in such terms.

A similar case of misunderstanding was noted in Temueo, Chile, where pregnant women were told by the physician to walk 3 kilometers a day if they felt well. At a meeting at which volunteer nurse's aides were being trained, the nurse asked, "How much exercise should a pregnant woman take every day?" All trainees promptly replied, "Walk 3 kilometers daily if you feel well." The anthropologist asked, "How far is 3 kilometers?" This precipitated a lively discussion. Some women thought that the cipher "9," and others that 27 blocks, was a part of the formula. The women were unable to agree as to how far 3 kilometers is in terms of blocks. As in the case of time instructions, these instructions were of no use whatsoever to the audience toward which they were directed because the people were not trained to think in the same terms as the physician.

Hours of Work

Bureaucratic hours and practices were found to constitute a considerable cultural barrier to full acceptance of some *Servicio* projects. In much of Latin America, government hours are from 8 a. m. to 2 p. m., or a similar time period. Allowing time for opening and closing the office the effective hours are considerably reduced. Moreover, since full-time physicians are the exception rather than the rule, many physicians are at the health centers only an hour or two a day and have considerable latitude with respect to arrival time.

To be reasonably sure of attention, then, a patient must come early in the morning and await her turn. For a busy housewife, with many small children to get off to school, morning marketing chores to do and a husband coming home at noon to eat, the loss of half a day was found to be an almost insurmountable difficulty. Loss of time was the single most frequent complaint from health center patients. If some services could be rescheduled for the afternoon (as is actually done in a few centers), it is very likely that more patients would be attracted and that their attitude toward the center would be more favorable. In El Salvador, the semiprivate

Botón Azul, which offers prenatal service from 7 p. m. to 9 p. m., is an obvious success, as its crowded waiting room attests.

The Privy Problem

The humble pit privy may also be used to illustrate the importance of understanding the general cultural configurations of a country. Privy campaigns probably have been carried out in all Latin American countries. Public acceptance in some instances has been good, but all too often privies have been used as chicken coops or as grain silos. Customary posture in defecating is perhaps the single most important fact which bears on the acceptance or rejection of privies.

A coffee planter in El Salvador, for example, built a series of privies, one for each house on his plantation, according to the standard American "riser" model. He was upset when his employees refused to use them. Finally an old man offered the suggestion, "Patrón, don't you realize that here we are squatters?" The planter ripped out the seats, replaced them with a perforated slab floor, and was gratified to find that public acceptance was general.

In La Dorado, Colombia, *Servicio*-built privies appeared to meet all cultural specifications, but were not well accepted. The anthropologist found that an important factor was the belief that bad odors in themselves are carriers of infection and causes of illness. Many people felt they were observing good hygiene in not using privies.

BASIC CULTURAL FACTS

Since greatly increased attention is being given to cultural factors in the planning and operation of public health programs, some of the general theoretical implications of the work done by the anthropologists who participated in the survey may be mentioned. Foremost among these is the question of how much an administrator must know about a given culture in order to carry out a specific project. Ideally, the more he knows about the cultural milieu in which he operates or proposes to operate, the more successful he will be.

It is axiomatic with anthropologists that culture is an integrated, functional whole, in which the separate parts continually impinge upon each other, conditioning and governing, and in turn being conditioned and governed. A change in one part of a culture will produce secondary and tertiary disturbances in other parts, or the primary change may be difficult to induce because of limiting circumstances surrounding adjacent areas of culture.

In Latin America, the success of public health programs is to a very considerable extent dependent on corresponding advances and modifications in a number of other aspects of the culture. These embrace technological devices, systems of social and political organization, and attitudes and values. Bodily hygiene, for example, is more than a question of education and persuasion. It implies the presence of pure water in reasonable quantities—a system of piped water in most instances. But a modern water distribution system requires a maintenance organization, tools and replacement parts, power for pumps, and a sociopolitical structure to administer the system, collect bills, and provide personnel. Improved bodily hygiene, therefore, requires new mechanized devices, new technical knowledge, new attitudes, and new systems of cooperation. The individual who operates on the assumption that a superior idea or technique alone will attract supporters, regardless of the cultural context into which it is introduced, will encounter many frustrating experiences.

Primary Social Data

Although it is desirable to know as much about a culture as possible, there are obviously strict limitations as to what can be known. Social scientists have barely made a beginning in the formidable task of describing the elements of the cultures of the world and interpreting their significance. It must be assumed that for any given program there are certain categories of information about the culture in which the work is to be carried out which are of primary importance, and others that are of lesser importance. A "trial run" in compiling a list of primary classes of data for public health programs gives the following picture.

The points mentioned are suggestive and illustrative and do not pretend to be a definitive catalog.

Folk medicine and native curing practices. The significance of these data has been discussed.

Economics, particularly incomes and costs of living. The cited case of failure to build privies because of their relatively high cost indicates the importance of this aspect of the culture. Inability to pay for medicine is one reason why many persons fail to avail themselves of treatment at the health center. The possibility of achieving a balanced diet is also restricted by inability to pay. Inadequate housing is a great problem in many parts of Latin America. Since in the final analysis the success of public health programs rests upon major changes in the habits of people with respect to diet, housing, clothing, agriculture, and the like, knowledge of the economic potential of an area is paramount.

Social organization of families. In Xochimilco, Mexico, for example, a bride often lives in her husband's home, under the domination of her mother-in-law. A number of cases were noted in which pregnant women failed to follow, or had difficulty in following, health center recommendations because these conflicted with what the mother-in-law thought was best.

Men and women who live together are frequently not legally married. Under such circumstances, a man is less likely to recognize obligations to his companion and their children, and it is therefore more difficult to persuade him to come to the health center for venereal or other treatment. Recognition of these and similar problems makes the responses of patients more intelligible.

Education and literacy. Ability to comprehend the real nature of health and disease, to profit by health education, and to understand and follow the physician's instructions depends on the education and literacy of the people.

Political organization. Local conditions under which physicians and other staff members are appointed, bureaucratic rules which govern operations, and the like, are factors which will affect public health programs. In one country, for example, a large health center, not yet placed in operation, was seriously threatened by the conflicting interests of the state gover-

nor, the local nurses' union, and other bureaucratic factors.

Religion. A basic analysis of religious tenets is not essential, but some parts of the religious philosophy of the people should be known. Are there any beliefs which hinder or directly conflict with proposed programs? Is death, for example, at any age considered a welcome relief from a world of suffering? Are there food taboos based on religious sanction which should be taken into consideration in planning diets?

Basic value system. What are the goals, aspirations, fundamental values, and major cultural premises, consciously or unconsciously accepted, which give validity to the lives of the people in question? What is the practical significance, for example, of a fatalistic approach to life and death? What part does prestige play in determining customary behavior patterns of the people? Is male vanity and ego a factor to consider? What are the ideas of bodily modesty? What are the types of stimuli and appeal to which people respond most readily?

Other types of data. Planners and administrators of public health programs should also have at hand such information as credit facilities and money usages, labor division within the family, time utilization, working and eating schedules, cooking and dietary practices, and the importance of alcoholism.

Categories of culture in which precise knowledge would appear to be of lesser importance include agriculture, fishing, and other primary productive occupations, industrial techniques (except as working conditions may affect health), trade and commerce, religious fiestas and church observances, wedding ceremonies, burial customs, and music and folk tales.

Use of Social Science Data

Specific health programs should be projected against basic data, decisions made as to what specialized additional information is needed, and plans made to gather such information.

For some parts of the world, considerable quantities of these basic or "core" data are available. Latin America is such an area. The

anthropologists who made this analysis were working in a field in which a great deal of preliminary, pertinent work had been done. Anthropologists, and to a lesser extent sociologists, have for more than 20 years been quietly gathering, analyzing, and publishing data on Latin American cultures. Much of this work was done with no thought of immediate practical application. Nevertheless, it represents a large stock of accumulated scientific "capital," much of the value of which lies in the fact that it is generalized and not specialized, and therefore affords a workable background for the institution of a wide variety of programs.

The discovery, classification, and interpretation of new facts merely points the way to continuing research. Simultaneously, however,

this process makes possible the solution of technical problems of steadily increasing complexity and variety, and consequently of expanding utility in the practical or applied context.

Therefore, one of the best uses of the social sciences in the bilateral health programs of the Institute of Inter-American Affairs is the direct assignment to field parties of individuals well versed in the most recent developments in their fields, both to do generalized cultural research and to gather specialized information to facilitate specific projects. Such a plan would make it possible for administrators and program planners to have a continually growing body of precise factual information which, judiciously utilized, would eliminate much of the guesswork which otherwise cannot be avoided.

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